Special Articles and Association Notes

The Manitoba Medical Association Review

Formerly the Bulletin of the Manitoba Medical Association

ESTABLISHED 1921

WINNIPEG, MAY, 1939

Published Monthly by the
MANITOBA MEDICAL ASSOCIATION
Editorial Office
102 MEDICAL ARTS BUILDING, WINNIPEG

Editor
C. W. MACCHARLES, M.D. (MAN.)
Advisory Editor
ROSS B. MITCHELL, B.A., M.D., C.M. (MAN.), F.R.C.P.(C.)
Business Manager
J. GORDON WHITLEY
Annual Subscription - $2.00

Editorial or other opinion expressed in this Review is not necessarily sanctioned by the Manitoba Medical Association

[COPYRIGHT]

Visit of Their Majesties to Canada

The members of the medical profession join with all other citizens in welcoming to Canada His Majesty King George VI. and Queen Elizabeth. This is the first time that a reigning sovereign has visited one of the Dominions and the innovation has wide constitutional implications.

Their Majesties have both for long shown a special interest in health problems. His Majesty the King is patron of the Canadian Medical Association and also of the Canadian Society for the Control of Cancer. During their tour of Winnipeg they will visit the disabled soldiers at the Deer Lodge Military Hospital.

Annual Meeting Manitoba Medical Association

Scientific Programme

Arrangements are already underway for the scientific programme for the Annual Meeting, September 11th, 12th and 13th. The Canadian Medical Association are arranging to send two clinicians, the President of the Canadian Medical Association and the Secretary. The names of the visiting speakers will be announced at an early date.

Scientific Exhibits

The Committee in charge of Scientific Exhibits for the Annual Meeting request that those who have material available and wish to arrange for its inclusion, should communicate with the Chairman before July 1st.

Correspondence may be sent to the Secretary of the Manitoba Medical Association, 102 Medical Arts Building, Winnipeg, and will be forwarded to the Committee.

Winnipeg Medical Society

Annual Meeting

The Annual Meeting of the Winnipeg Medical Society will be held in the Physiology Lecture Theatre of the Medical College on Friday, May 19.

The presidential address by Dr. O. C. Trainor will be on Health Insurance.

Brandon and District Medical Association

The Annual Meeting of the Brandon and District Medical Association will be held at the Prince Edward Hotel, Brandon, on May 5th at 7 p.m.

Canadian Medical Association

The Annual Meeting of the Canadian Medical Association will be held in Montreal June 19th to 23rd. The headquarters will be at the Windsor Hotel.

The visiting speakers will include Professor E. P. Catheart, Professor of Physiology at the University of Glasgow; Dr. A. J. Bedell of Albany, N.Y., U.S.A., an authority on opthalmology; Dr. Clara M. Davis of Winetka, Ill., U.S.A., an expert on the modern feeding of infants, and Professor Norman Miller, Professor of Obstetrics and Gynaecology at the University of Michigan, U.S.A.

The entertainment committee have arranged an interesting programme, including a dance at the Normandie Roof of the Mount Royal Hotel, a golf tournament and banquet at the Royal Montreal Golf Club, and golf games at various courses throughout the week.

The ladies' committee have arranged special entertainment for the visiting ladies.

American Congress of Obstetrics and Gynaecology

The American Committee on Maternal Welfare has sponsored a Congress on Obstetrics and Gynaecology to study the present day problems on Obstetrics and Gynaecology. The Congress will be held in Cleveland, Ohio, U.S.A., September 11th to 15th, 1939.

There will be sessions for each professional group with round table discussions and formal addresses.

- **GASTRIC ACIDITY**
  Immediate control
  Prolonged control
  Localized control
- **ULCER PROTECTING POWER**
  Maximum
- **GASTRO-INTESTINAL SPASM**
  Corrected
- **GASTRO-INTESTINAL FUNCTION**
  Not disturbed
- **TOXIC ALKALOSIS**
  Absent
- **CLINICAL RESULTS**
  Excellent

. . . in the treatment of digestive disturbances associated with increased acidity of the stomach . . . .

In respect to its acid neutralizing and adsorbent qualities, magnesium trisilicate **(the active ingredient of "Tricepiol")** "far transcends bismuth salts, magnesia, aluminium hydroxide, prepared chalk and other medicaments in these conditions". *Mutch, N. Hydrated magnesium trisilicate in peptic ulceration. Brit. Med. J. 1:254-7 (Feb. 8) 1936.*

No. 937 "TRICEPIOL" — a palatable preparation containing, in each average teaspoonful, 35 grains of hydrated magnesium trisilicate associated with pectin and glucose.

No. 938 "TRICEPIOL" COMPOUND — has a similar basic formula to "Tricepiol" but contains, in addition, 1/500 grain of atropine sulphate and 1/8 grain of phenobarbital per average teaspoonful.

Available in bottles containing 5½ ounces.

AYERST, McKENNA & HARRISON LIMITED
Biological and Pharmaceutical Chemists
MONTREAL • CANADA

872

Department of Health and Public Welfare

NEWS ITEMS

The following is the second and final instalment of the article on "Focal Infection with Particular Emphasis on Preventive Aspects for Individuals Between 21 and 45 Years of Age" by W. J. Stainsby and Edith E. Nicholls.

THE INTESTINAL TRACT AS A FOCUS OF INFECTION

"The gastro-intestinal tract is frequently the site of chronic localized disease, and consideration must be given to it in any discussion of focal infections.

"Peptic Ulcers. Gastric and duodenal ulcers are frequently encountered in the age group under discussion. The etiology of these lesions is not known, and the infection usually found at the base and around such ulcers is probably of secondary importance. No definite evidence has yet been presented that they are caused by foci of infection or act as such for disease elsewhere in the body.

"The Vermiform Appendix and Intestinal Diverticula. These structures are at times the seat of chronic localized infections which may produce disease elsewhere in the body. The writers have seen a few cases of rheumatoid arthritis that were apparently caused by a chronically diseased appendix following the removal of which, the arthritis cleared up.

"Lower Intestinal Ulcers. Ulcers of the lower intestinal tract may be due to infectious agents, parasites, nutritional disturbances or to unknown causes. It seems quite likely that the infectious ulcers may act as a foci of infection, and for the prevention of disease elsewhere in the body serious consideration must be given to such lesions.

"The Normal Intestinal Tract. Almost all microorganisms associated with the various foci of infection may be recovered from the feces of healthy individuals. Streptococci, especially of the viridans type, colon bacilli, either hemolytic or non-hemolytic, and various staphylococci should be considered as possible normal inhabitants of the lower intestinal tract. These organisms have been accused of passing through healthy intestinal mucosa and initiating various disease processes elsewhere in the body. No convincing evidence to support this view has as yet been published.

"Constipation. While constipation is a serious dysfunction of the intestinal tract, the frequency of this condition has been much overemphasized through extensive advertising by certain manufacturers of proprietary medications. Many individuals with normal health may have bowel movements at only two or three day intervals. Constipation has sometimes been accused of producing a condition of the bowel that would permit microorganisms or their toxic products to pass to other parts of the body and produce disease. While undoubtedly a toxic absorption due to constipation is capable of producing symptoms in the patient, there is no evidence that such absorption can produce disease in the accepted meaning of the term 'focal infection.'

"Gall Bladder. The gall bladder frequently becomes chronically infected with streptococci, colon bacilli, and staphylococci and acts as a focus of infection for disease elsewhere in the body. The relationship of chronic cholecystitis and subacute combined sclerosis has been mentioned by some writers.

1. Opie, Eugene L. and Freund, Jules. An experimental study of protective inoculation with heat killed tubercle bacilli. Jour. Exper. Med. 66: 761 (December, 1937).

RHEUMATOID ARTHRITIS AND FOCAL INFECTION

"Rheumatoid (atropic, proliferative) arthritis has a definite relationship to foci of infection. While not definitely established, much evidence exists for the belief that the hemolytic streptococcus is the primary etiologic agent in a high percentage of cases of rheumatoid arthritis, and that other factors such as inherited predisposition, exposure to dampness and cold, overwork and worry, while important, play a secondary role in producing the disease. Therefore, it is essential in the prevention of rheumatoid arthritis that individuals be not permitted to harbor chronic foci infected with hemolytic streptococci. The tonsils and other lymphatic tissues of the naso-pharynx are frequently associated with such infections; the teeth and sinuses are next in importance and other foci of infection less commonly.

"In the treatment of well developed rheumatoid arthritis, removal or treatment of foci of infection constitutes one of the most important therapeutic procedures. A small proportion of such cases are completely relieved by the removal of such foci. This is particularly true in the very early cases, when the onset of the disease can be associated with an attack of tonsillitis or sinusitis or the development of an abscessed tooth. With a considerable number of cases of rheumatoid arthritis, particularly those moderately advanced, removal of foci of infection has to be supplemented with other forms of therapy in order to effect recovery. With the advanced cases, especially those that have considerable deformity with little further progression of the disease process, removal of primary foci of infection seldom modifies the course of the disease. It seems that once well developed pathological changes occur in the joints due to the arthritis, the joints themselves take on the aspects of a focus of infection and the removal of the primary focal infection is of little benefit to the patient.

GLOMERULONEPHRITIS AND FOCAL INFECTION

"While the etiology of glomerulonephritis remains obscure, the onset of the disease is almost always associated with a hemolytic streptococcus infection somewhere in the body. Diseases of the upper respiratory tract, particularly tonsillitis and peritonsillar abscesses, pharyngitis, sinusitis, the common cold, 'grippe' and scarlet fever, are generally responsible for initiating an attack of the disease. On the other hand, glomerulonephritis is very rare in countries where hemolytic streptococcus infections are uncommon.

"For the prevention of glomerulonephritis, therefore, focal infections that harbor the hemolytic streptococcus should be treated.

"When the glomerulonephritis has already developed, an existing sinusitis or mastoiditis should be treated without delay. If diseased tonsils are present, tonsillectomy should be delayed until after the subsidence of the acute nephritis symptoms. Tonsillectomy in such patients sometimes causes a recurrence of the glomerulonephritis, but the relapse is usually mild and of short duration.

RHEUMATIC FEVER AND FOCAL INFECTION

"A high percentage of initial attacks of rheumatic fever occurs in childhood. Nevertheless, a small proportion does develop in adult life, and as about 45 per cent. of all deaths from this disease occur after the age of 30, it should be included in the age group under discussion.

"Several investigators have clearly demonstrated that hemolytic streptococcus infections, particularly those of the upper respiratory tract, frequently precede or are associated with the onset of rheumatic fever. These workers have also shown that in countries where hemolytic streptococcus infections are uncommon rheumatic fever is rarely found.

"As a preventive measure for this disease, it is highly important that chronic foci of infection especially in the upper respiratory tract should be eradicated, as such localized inflammations tend to increase the frequency of respiratory disease which in turn may initiate the onset of rheumatic fever. The tonsils and sinuses are probably more important than other foci in this respect.

"When rheumatic fever is already developed, diseased tonsils should be removed and infected sinuses treated as soon as the patient's general condition permits it. Removal of such foci does not eliminate recurrences but inasmuch as such therapy lessens the frequency of upper respiratory infections, it likewise decreases the incidence of recurrences. It must be remembered in this regard that secondary etiologic factors, such as exposure to dampness and cold, malnutrition, unhygienic living conditions, play an important role in the development or recurrence of rheumatic fever.

NEURITIS AND FOCAL INFECTION

"A neuritis may involve one nerve, when it is known as mononeuritis or localized neuritis, or it may affect symmetrically distributed nerves when it is known as multiple or polyneuritis. The former variety may be caused by trauma, but both may be initiated by either chronic poisoning from alcohol or various chemicals, from lack of vitamins, or by infection such as the contagious diseases or focal infections. The foci of etiological importance in neuritis are generally located about the nose and throat, particularly the tonsils, teeth and sinuses. Spectacular results are sometimes obtained with these conditions by the removal of definitely infected foci of infection.

DISEASES OF THE RESPIRATORY TRACT AND FOCAL INFECTION

"Asthma. The part played by focal infections in the various types of asthma has not been clearly defined. There seems little doubt, however, that a certain small perecentage of cases are primarily related to foci of infection, as patients with long-standing asthma have been known to obtain prompt and continued relief following the removal of an inflamed gall bladder, infected teeth, diseased tonsils, or the treatment of chronically diseased accessory nasal sinuses. Also, patients known to be suffering from pollen asthma and who are usually relieved with the onset of freezing weather sometimes continue to have asthmatic symptoms due to secondary infections in the bronchi or other parts of the upper respiratory tract.

"Focal infections, therefore, are of importance in the various types of asthma and their removal or treatment is indicated whenever they are found to be definitely diseased.

"Bronchiectasis. Bronchiectasis is a chronic progressive disease of the bronchi and bronchioles that is characterized by a dilatation of the tubes. It may be congenital or acquired. The latter type is produced by damage to the bronchial tissue or to mechanical factors either within or without the bronchus that produce a dilatation. Damage to the bronchial tissue is chiefly the result of bronchial infections. These infections occur during the course of various contagious diseases such as measles and whooping cough, from lobar and broncho-pneumonia, or from influenza. Another cause of bronchiectasis is bronchitis, either acute or chronic, that is produced by long standing focal infections of the upper respiratory tract, particularly of the accessary nasal sinuses. Even when focal infections are not the primary etiological source of the bronchiectasis, they frequently are responsible for initiating or continuing the infection in these structures. It is very important therefore to eliminate, if possible, focal infections in the sinuses, teeth, and tonsils, in patients suffering from bronchiectasis.

VACCINES AND FOCAL INFECTION

"Vaccines have been used extensively for the past twenty years for the treatment of certain focal infections that are not subject to surgical removal and which do not respond well to other forms of treatment. A discussion of focal infection would, therefore, not be complete without consideration of vaccine therapy. Vaccines have been used particularly for chronic infections of the sinuses, other infections of the naso-pharynx, otitis media, as well as for frequent attacks of upper respiratory infections. Vaccines for this purpose are of two types, the autogenous, made from cultures derived from the diseased structures of the patient to be treated, and stock vaccines, made from cultures of a variety of organisms that are usually associated with focal infections or upper respiratory diseases, such as Staphylococcus aureus, the hemolytic and green producing streptococci and certain types of pneumococci.

"Let us consider first of all the known evidence for vaccine therapy. Certain clinical evidence exists that autogenous and stock vaccines made from Staphylococcus aureus, from Staphylococcus albus or from Staphylococcus citreus, or from all three of these combined are of value prophylactically and therapeutically for carbuncles, furuncles and acne that are caused by these organisms. Certain clinical evidence also exists that both autogenous and stock vaccines of the acne bacillus have therapeutic value in the treatment of acne caused by this type of organism. It is well established and universally recognized that typhoid vaccine has definite prophylactic value for typhoid fever. Opie and Freund[1] quite recently have demonstrated that a vaccine can be made from tubercle bacilli which, when repeatedly injected into or below the skin of rabbits, increases their resistance against infection with virulent tubercle bacilli.

"With vaccine therapy thus established in a limited field, this form of therapy has been tried extensively for focal and upper respiratory infections.

"The use of autogenous vaccines for the treatment of chronic sinusitis, other chronic infections of the naso-pharynx, bronchitis, and frequent upper respiratory infections, as well as non-gonococcal infections of the prostate and cervix, thus appears to be a rational procedure and worthy of serious trial. It presupposes that the infection itself is unable to produce sufficient immune bodies to effect a cure of the infectious process. While the procedure is logical, the results have been very disappointing. To date, no definite evidence has been produced that such vaccines aid in eradicating or preventing such infectious processes. The focal infections may be too isolated for the immune body fluids to affect the microorganisms and it may be that the types of organisms associated with these infections are too low in immunity-producing powers to produce an effective immunity in the body fluids or tissues. At any rate, autogenous vaccines for the above mentioned focal infections are very disappointing. It is hoped that some better way of preparing the vaccines or some better way of administration will eventually yield satisfactory results.

"The use of stock vaccines made from cultures of a variety of organisms for the prevention and treatment of focal infections is, in general, an irrational procedure. Without bacteriological examination of the infected lesion, there are too many pathogenic microorganisms or biological varieties of these microorganisms that may be of etiologic importance in

producing or maintaining the infectious process for one to hope to obtain satisfactory results from a 'shotgun' vaccine. An exception to this is when a staphylococcus is the predominating organism associated with a localized infection, in which case a stock staphylococcus vaccine might be effective, although even here the likelihood of success would seem to be enhanced if an autogenous vaccine made with the predominating organisms were used."

COMMUNICABLE DISEASES REPORTED

Urban and Rural - March, 1939

Occurring in the Municipalities of:

Scarlet Fever: Total 170—Brandon 42, Winnipeg 33, Boissevain 7, Virden 7, North Norfolk 6, Strathclair 6, Saskatchewan 4, Shoal Lake Village 3, Morris Town 2, Morton 2, St. Boniface 2, Unorganized 2, Whitewater 2, Assiniboia 1, Elton 1, Fort Garry 1, Gretna 1, Kildonan East 1, Kildonan West 1, Macdonald 1, Odanah 1, Rockwood 1, Roland 1, Ste. Rose Village 1, Wallace 1 (Late Reported: January, Winchester 5, Deloraine 2; February, Brandon 14, North Norfolk 9, Kildonan East 4, Daly 2, Portage Rural 2, Unorganized 2).

Mumps: Total 163—Winnipeg 123, Morris Town 16, Tuxedo 8, St. James 6, Kildonan East 2, Morris Rural 2, Wawanesa 2, St. Boniface 1 (Late Reported: February, Brandon 2, Morris Town 1).

Influenza: Total 91—Unorganized 46, Portage City 17, Winnipeg 12, Louise 7 (Late Reported: January, Brandon 3, Montcalm 1, Pilot Mound Village 1, St. Boniface 1, Whitehead 1; February, St. Clements 1, Teulon Village 1).

Measles: Total 67—Morden Town 41, Boissevain 8, Argyle 6, Louise 5, Winnipeg 4, Franklin 1 (Late Reported: February, Argyle 2).

Chickenpox: Total 65—Winnipeg 27, Minnedosa 12, Louise 6, Strathclair 4, Flin Flon 2, St. Boniface 2, Kildonan East 1, Montcalm 1, Morris Town 1, Ste. Anne 1 (Late Reported: February, St. Boniface 7, Minitonas 1).

Smallpox: Total 47—Boulton 13, Minitonas 7, Shellmouth 1, Swan River Town 1 (Late Reported: February, Swan River Rural 19, Minitonas 4, Hillsburg 1, Roblin Town 1).

Whooping Cough: Total 43—Winnipeg 27, St. James 7, Lawrence 4, Kildonan West 1, Minitonas 1, The Pas 1 (Late Reported: February, St. Boniface 2).

Lobar Pneumonia: Total 14—Brandon 3, Portage City 1 (Late Reported: January, Brandon 2, Lorne 2, Edward 1, Roblin Rural 1, St. Vital 1, Thompson 1, Transcona 1, Turtle Mountain 1).

Erysipelas: Total 12—Winnipeg 6, St. Boniface 2, Kildonan East 1, Kildonan West 1, Silver Creek 1 (Late Reported: January, St. James 1).

Diphtheria: Total 10—Winnipeg 2, Flin Flon 1, Franklin 1, Neepawa 1, Ste. Anne 1, St. Boniface 1, Unorganized 1 (Late Reported: February, Swan River Town 1, Tache 1).

Tuberculosis: Total 8—Winnipeg 8.

German Measles: Total 6—Brandon 5, Sifton 1.

Typhoid Fever: Total 4—De Salaberry 2, Ste. Anne 1 (Late Reported: January, Portage la Prairie City 1).

Epidemic Encephalitis: Total 1—(Late Reported: February, Pembina 1).

Septic Sore Throat: Total 1—Morris Town 1.

Infective Dysentry: Total 1—(Late Reported: January, McCreary 1).

Venereal Disease: Total 108—Gonorrhoea 57, Syphilis 51.

DEATHS FROM ALL CAUSES IN MANITOBA

For the Month of February, 1939

URBAN—Cancer 40, Tuberculosis 13, Influenza 9, Lobar Pneumonia 7, Pneumonia (all forms) 6, Syphilis 2, Erysipelas 1, Tetanus 1, Malarial Fever 1, Septic Sore Throat 1, all others under one year 15, all other causes 136, Stillbirths 13. Total 245.

RURAL—Cancer 22, Pneumonia (all forms) 14, Tuberculosis 12, Influenza 9, Lobar Pneumonia 8, Puerperal Septicaemia 2, Infantile Paralysis 1, Lethargic Encephalitis 1, Syphilis 1, Whooping Cough 1, all others under one year 18, all other causes 130, Stillbirths 10. Total 229.

INDIAN—Tuberculosis 4, Pneumonia (all forms) 3, Influenza 1, all others under one year 5, all other causes 2, Stillbirths 1. Total 16.

The New Synthetic Antispasmodic . . .

TRASENTIN "CIBA"

(Diphenylacetyldiethylaminoethanolester-hydrochloride)

SUPPRESSES SPASMS OF THE GASTRO-INTESTINAL TRACT, GENITO-URINARY SYSTEM AND OTHER SMOOTH MUSCLE ORGANS.

Tablets—bottles of 20 and 100. **Ampoules**—boxes of 5 and 20.

1 *tablet or* 1 *ampoule contains* 0.075 *grm. of the active substance.*

CIBA COMPANY LIMITED, Montreal

THE MARGARET SCOTT NURSING MISSION

Free Home Visiting Nursing in Greater Winnipeg

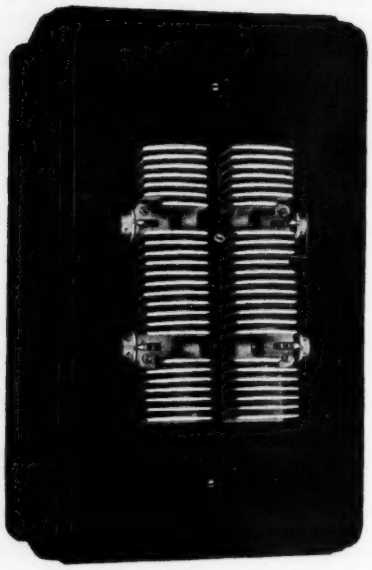
99 George Street Phone 96 839

FACILITATES *the* INGESTION OF MILK

Vi-Tone in milk breaks down the tough and hard curd formed in the stomach by the ingestion of straight cow's milk. A highly palatable, richly nourishing, easily prepared food-drink.

FOOD TONIC BEVERAGE **VI-TONE**

Introducing — The G-E Model "C" Electrosurgical Unit



NEW from stem to stern; packed with inherent advantages, the G-E Model "C" Unit has been built to enhance the benefits of electrosurgery. This is its introduction to the medical profession.

So complete and refined is the method of control that the surgeon may have at the electrode tip just the quality and quantity of high-frequency current desired for the work at hand, whether it be the delicate coagulation of some growth or transurethral prostatic resection.

Factory-adjusted self-compensating gaps of an entirely new type are incorporated. They assure on unfailing supply of smooth current for cutting, desiccating, or coagulating. So closely calculated have been the factors of heat expansion and so nicely engineered the gaps, that even long continued operation will not cause a change in the spacings. You will appreciate that this feature spells real dependability.

From the beautiful streamlined case to the smallest integral part of the unit there is excellency of manufacture, soundness of design, and indication of long, satisfactory, economical life. There are many other advantages that would be of interest to you, such as for instance the reasonable price.

Send for descriptive catalog!

You will want to study this book, for not only does it tell the complete story of the G-E Model "C" Electrosurgical Unit but also reprints authoritative information regarding electrosurgery. We would appreciate your addressing your request for a copy to Department A225.

GENERAL ELECTRIC X-RAY CORPORATION

2012 JACKSON BLVD CHICAGO ILLINOIS

Medical Library
University of Manitoba

RECENT ACCESSIONS
March 12, 1938 — March 6, 1939

Duke-Elder, Sir Stewart. The practice of refraction, 3rd ed.
London, Churchill, 1938.

Economo, Constantin von. Zellaufbau der Grosshirnrinde des Menschen.
Berlin, Julius Springer, 1927.

Eden, T. W. A manual of obstetrics, by Thomas W. Eden and Eardley Holland; 8th ed.
London, Churchill, 1937.

Fairbrother, R. W. A text-book of medical bacteriology; 2nd ed.
London, Heinemann, 1938.

Friedenwald, J. Clinics on secondary gastro-intestinal disorders; reciprocal relationships, by Julius Friedenwald, T. H. Morrison and S. Morrison.
Baltimore, Wood, 1938.

Fyfe, Andrew. One hundred and fifty-eight plates to illustrate the anatomy of the human body, taken partly from the most celebrated authors, partly from nature.
Edinburgh, Black, 1830.

Fisher, C. Diabetes insipidus and the neur-hormonal control of water balance: a contribution of the hypothalamico — hypophyseal system, by Charles Fisher, W. R. Ingram and S. W. Ranson.
Ann Arbor, Mich., Edwards Bros., 1938.

Galdston, Iago. Maternal deaths — The ways to prevention.
New York, The Commonwealth Fund, 1937.

Gilman, Henry. Organic chemistry; an advance treatise.
New York, Wiley, 1938.

Glaister, John. Glaister's Medical jurisprudence and toxicology; 6th ed.
Edinburgh, Livingstone, 1938.

Gonzales, T. A. Legal medicine and toxicology, by Thomas Arthur Gonzales, Margan Vance and Milton Helpern, with a foreword by Harrison Maitland.
New York, Appleton-Century, [c1937.]

Gould, Sir Alfred Pearce. Elements of surgical diagnosis, by Sir A. P. Gould; rev. by Eric P. Gould; London, Cassell, 1937; 8th ed.

Grant, J. C. B. Method of anatomy; descriptive and deductive.
Baltimore, Wood, 1937.

Gray, A. A. The basis of tissue evolution and pathogenesis.
Glasgow, Jackson, Son & co., 1937.

Great Britain: Home Office Air Raid Precautions Department. An atlas of gas poisoning; 3rd ed.
London, H.M. Stationery Office, 1938.

Grinker, R. R. Neurology; 2nd ed.
Springfield, Ill., Thomas, [c1937.]

Hadfield, Geoffrey. Recent advances in pathology, by Geoffrey Hadfield and Lawrence P. Garrod; 3rd ed.
London, Churchill, 1938.

Haldane, J. B. S. Air raid precautions.
London, Victor Gollancz, 1938.

Hardy, J. A. A synopsis of the diagnosis of the acute surgical diseases of the abdomen.
St. Louis, Mosby, 1938.

Harris, L. J. Introductory and historical vitamin B_1 and Beri-beri, by Leslie J. Harris, with foreword by Sir Frederick G. Hopkins.
London, Churchill, 1938.

Hawk, P. B. Practical physiological chemistry, by Philip B. Hawk and Olaj Pergeim, in collaboration with Bernard L. Oser and Arthur G. Cole; 11th ed.
Philadelphia, Blakiston's Son and co., [c1937.]

Henderson, D. K. A text-book of psychiatry for students and practitioners, by David K. Henderson and R. D. Gillespie; 4th ed.
London, Oxford University Press, 1936.

Hypothalamus; Morphological functional and clinical and surgical aspects, by W. E. LeGros Clark, John Beattie, George Riddoch and Norman M. Dott.
Edinburgh, Oliver and Boyd, 1938.

Johnstone, R. W. A text-book of midwifery for students and practitioners; 9th ed.
London, Adam and Charles Black, 1937.

Jordan, E. O. A text-book of general bacteriology, by Edwin O. Jordan, revised by William Burrows; 12th ed. rev.
Philadelphia, Saunders, 1938.

Jordan, H. E. A text-book of embryology, by Harvey E. Jordan and James E. Kindred; 3rd ed.
New York, Appleton-Century, [c1937.]

Joslin, E. P. Treatment of diabetes mellitus; 6th ed.
Philadelphia, Lea & Febiger, 1937.

Kanner, L. Child psychiatry, by Leo Kanner, with prefaces by Adolph Meyer and Edwards A. Park.
Springfield, Ill., C. C. Thomas, [c1935.]

Kerr, J. M. M. Operative obstetrics. A guide to the difficulties and complications of obstetric practice, by John M. Munro Kerr, with the assistance of Donald McIntyre and D. F. Anderson; 4th ed.
London, Bailliere, Tindall and Cox, 1937.

Kirschner, M. Operative surgery: v. 3. The ear, air passages and neck, by M. Kirschner and others. Translated by I. S. Ravdin.
Philadelphia, Lippincott, 1937.

Kuntz, Albert. A text-book of neuro-anatomy; 2nd ed.
Philadelphia, Lea & Febiger, [c1936.]

League of nations. Health organization. Atlas; illustrating the division of cancer of the uterine cervix into four stages according to the anatomo-clinical extent of the growth. Prepared by J. Heyman and M. Strandquist.
Stockholm, 1938.

League of nations. Social services and venereal disease. Advisory Committee on social questions. Enquiry into measures of rehabilitation of prostitutes.
Geneva, League of nations, 1937.

Litzenberg, J. C. Contributions to the pathology of pregnancy.
Lawrence, University Extension Division, University of Kansas, 1937.

Lloyd, D. J. Chemistry of the proteins, by Dorothy J. Lloyd and Agnes Shore; 2nd ed.
London, Churchill, 1938.

Lizars, John. A system of anatomical plates of the human body; accompanied with descriptions, and physiological, pathological and surgical observations.
Edinburgh, W. H. Lizars, 1823-1833. (2 parts—Text and atlas).

Lord, Elizabeth E. Children handicapped by cerebral palsy: Psychological factors in management, by E. E. Lord, with a medical explanation by Bronson Crothers.
New York, The Commonwealth Fund, 1937.

℞

DAGENAN

(M and B 693)

In the Treatment of

PNEUMOCOCCAL

INFECTIONS

BRATHWAITES LTD.

Phone 21 085

PORTAGE at VAUGHAN

WINNIPEG

for . . .

Quality Minded men!

at McCreerys you can buy a Coat or a Suit with the quality and workmanship you demand, in the fabric of your choice, from a varied selection of the newest patterns, smartly tailored to fit your individual requirements, at prices that are reasonable always.

READY to WEAR or
MADE to MEASURE
also
HATS, SHIRTS AND FURNISHINGS

McCREERYS LTD.

293 Portage Ave. Winnipeg

(One door East of Capitol Theatre)

Lord, Frederick T. Pneumonia and serum therapy, by Frederick T. Lord and Roderick Heffron. Revised edition of Lobar pneumonia and serum therapy.
New York, The Commonwealth Fund, 1938.

Louis, Pierre - Charles - Alexander. Pathological researches on phthisis. Translated from the French, with introduction, notes, additions, and an essay on treatment, by Charles Cowan. Revised and altered by Henry I. Bowditch.
Boston, Gray, 1836.

MacCallum, W. G. A text-book of pathology; 6th ed.
Philadelphia, Saunders, 1937.

Maingot, Rodney. Post-graduate surgery, edited by Rodney Maingot, with an introduction by the Right Hon. Lord Moynihan of Leeds.
London, Medical Publications ltd., 1936-37. 3 v.

Mainland, Donald. The treatment of clinical and laboratory data. An introduction to statistical ideas and methods for medical and dental workers.
Edinburgh, Oliver and Boyd, 1938.

Maximow, A. A. A text-book of histology, by Alexander A. Maximow and William Bloom; 3rd ed.
Philadelphia, Saunders, 1938.

Means, James H. The thyroid and its diseases . . . being an account based in large measure on the experience gained in the Thyroid clinic of the Massachusetts general hospital by the following physicians and surgeons of the Clinic: A. W. Allen, G. W. W. Brewster, O. Cope and many other collaborators, past and present.
Philadelphia, Lippincott, [c1937.]

Medical register. Published under the direction of the general council of Medical education and registration of the United Kingdom.
London, The General Medical Council, 1937.

Mekie, E. C. Handbook of surgery.
Edinburgh, Livingstone, 1936.

Merritt, H. H. The cerebrospinal fluid, by Hiram H. Merritt and Frank Fremont-Smith, with a foreword by James B. Ayer.
Philadelphia, Saunders, 1938.

Miles, Alexander. Operative surgery, by Alexander Miles and D. P. D. Wilkie; 2nd ed.
London, Oxford University Press, 1936.

Minnitt, R. J. Gas and air analgesia.
London, Baillière, Tindall and Cox, 1938.

Monrad-Krohn, G. H. The clinical examination of the nervous system; 7th ed.
London, Lewis, 1938.

Monro, Alexander. The anatomy of the urinary bladder and perinaeum of the male. Illustrated by engravings, with physiological, pathological, and surgical observations.
Edinburgh, MacLachlan, Stewart and co., 1842.

Muir, Richard. Muir's Bacteriological atlas. Atlas enlarged and rewritten by C. E. van Rooyen; 2nd ed.
Edinburgh, Livingstone, 1937.

Muir, Sir Robert. Muir and Ritchie's Manual of bacteriology, revised by Carl H. Browning and Thomas J. MacKie; 10th ed.
London, Oxford University Press, 1937.

Musser, J. H. Internal medicine: Its theory and practice. Contributions by American authors: 3rd ed. rev.
Philadelphia, Lea & Febiger, 1938.

New York Tuberculosis and Health Association, Inc. Criteria for the classification and diagnosis of heart disease; 3rd ed.
New York, New York Tuberculosis and Health Association, 1938.

(Continued on page 104)

An Acceptable Super-Nourishment

Every family medical adviser meets with cases in his practice where children simply won't eat sufficient substantial food. In consequence their young patients will show signs of anaemia and mal-nutrition. Weight will be below normal, and their resistance will be low.

Ovaltine has been found highly beneficial in such cases. Ovaltine is the concentrated nourishment of fresh milk and eggs and a special barley malt extract, lightly flavoured with cocoa. It is rich in factors of diet the child refuses in foods as ordinarily prepared. And children like it.

OVALTINE CONTAINS THESE DIETARY FACTORS

Proteins, Carbohydrates, Calcium, Phosphorus, Iron and Vitamins A, B, D and G.

OVALTINE

TONIC » FOOD » BEVERAGE

Manufactured by A. Wander Limited, Peterborough, Canada
Factories also in England, Switzerland, France and the United States.

A Simple Solution *of the* INFANT FEEDING problem

A big problem in the bottle feeding of infants has been to find a form of carbohydrate which will not irritate the intestinal tract of the infant and yet one which can be readily digested. These purified and specially prepared corn syrups are a mixture of pure carbohydrates which can be quickly and readily assimilated.

Thousands of successful cases, even with sub-normal infants, testify to the excellence of "CROWN BRAND" or "LILY WHITE" CORN SYRUPS for use as a milk-modifier for infant feeding.

Produced under the most hygienic conditions by the oldest manufacturers of corn syrups in Canada, you can have positive confidence in the purity and reliability of

EDWARDSBURG
"CROWN BRAND" CORN SYRUP
***and* "LILY WHITE" CORN SYRUP**

***Manufactured by* THE CANADA STARCH COMPANY Limited**
Montreal and Toronto

FOR DOCTORS ONLY
A convenient pocket calculator, with varied infant feeding formulae and a scientific treatise in book form for infant feeding are available on request. Kindly clip the coupon and this useful material will be mailed to you.

THE CANADA STARCH CO. Limited
Montreal

Please send me
- ☐ FEEDING CALCULATOR.
- ☐ Book "CORN SYRUPS FOR INFANT FEEDING."
- ☐ PRESCRIPTION PADS.
- ☐ Book "THE EXPECTANT MOTHER."
- ☐ Book "DEXTROSOL."

Name.....

Address.....

Norris, G. W. Diseases of the chest and the principles of physical diagnosis, by George W. Norris and Henry R. M. Landis; 6th ed.
Philadelphia, Saunders, 1938.

Oertel, Horst. The special pathological anatomy and pathogenesis of the circulatory, respiratory, renal and digestive systems, including liver, pancreas and peritoneum.
Montreal, Renouf Publishing co., [c1938.]

Olmsted, J. M. D. Claude Bernard, physiologist.
New York, Harper, 1938.

Orr, Sir John Boyd. Food, health and income: Report on a survey of adequacy of diet in relation to income; 2nd ed.
London, Macmillan, 1937.

Osler, Sir William. The principles and practice of medicine, rev. by Henry A. Christian; 13th ed.
New York ,Appleton-Century, 1938.

Padgett, E. C. Surgical diseases of mouth and jaws.
Philadelphia, Saunders, 1938.

Parsons, Sir John Herbert. Diseases of the eye; 9th ed.
London, Churchill, 1938.

Penfield, Wilder. Cytology and cellular pathology of the nervous system.
New York, Hoeber, 1932. 3 v.

Purves-Stewart, Sir James. The diagnosis of nervous diseases; 8th ed.
London, Edward Arnold, 1937.

Manitoba Nurses' Central Directory
214 Balmoral St. Phone 72 151
24 HOUR SERVICE
REGISTERED NURSES
NURSING ATTENDANTS
Schedule of rates and hours on request.
P. BROWNELL, Reg. N.
Registrar.

LABORATORY
POULENC FRERES
OF CANADA LIMITED
204 YOUVILLE SQUARE—MONTREAL
The home of:
NOVARSENOBENZOL BILLON
STOVARSOL
GARDENAL
SONERYL
Detailed Literature Upon Request

PHYSIOTHERAPY
by J. C. Swann
Member of
The Canadian Physiotherapy Association
(Incorporated by Dominion Charter)
•
Graduate of: Massage, Swedish Movements, Muscle Re-education and Medical Gymnist, 2 years training in Christie Street Hospital, Toronto, Masseur at Deer Lodge Hospital, Pensions and Health, Winnipeg, for the past 15 years.
(Under Medical Supervision or Direction).
•
Phone 80 760 after 1 p.m. 438 Somerset Bldg. Winnipeg, Man. Res. Phone 54 195

DREWRYS DRY GINGER ALE
Doctors recommend it!
Hospitals advise it!
Patients ask for it!
—
3 Sizes
6-oz., 12-oz., 28-oz.
—
The Drewrys Limited
Phone 57 221

The Winnipeg Drug Co., Limited
H. D. CAMPBELL
PRESCRIPTION SPECIALISTS
Agents for
NICHOLSON'S VACCINES
•
407 PORTAGE AVE. (Cor. Kennedy)
Phone 21 621

Medical Business Bureau
101 Medical Arts Bldg. Winnipeg
•
COLLECTION of ACCOUNTS
PUBLIC STENOGRAPHY
AUDITING and BOOKKEEPING
•
J. L. HEWITT, *Manager.*

THE ANGLO-FRENCH DRUG COMPANY
354 Ste. Catherine Street E.
Montreal, Canada

BRANCHES:
LONDON, ENGLAND
NEW YORK, U.S.A.
PARIS, FRANCE
BOMBAY, INDIA

Greetings to you, Doctor:

A boil on the back of a man's neck is of more intense interest to him than the details of a battle somewhere on the other side of the world.

And a cinder in a man's eye gets more attention than a coal-barge on the river.

In other words, Doctor, the closer we come to the real things in life, the more they mean to us personally.

Our products may not be the most important preparations in the field of drugs and medicines. But to us they ARE important. And we consider the manufacture of every product worthy of our most careful attention and skill.

Our aim and ideal is to gain and hold the confidence and esteem of you men who make up the medical profession.

And it is our intention to continue to supply you with products which will always merit your confidence and goodwill.

Samples of any of our products will be gladly and speedily sent you. Just write.

Sincerely yours,

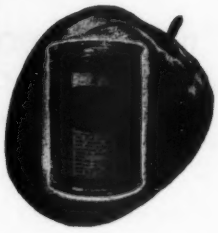
ANGLO-FRENCH DRUG COMPANY.

STANNOXYL
the original combination of tin and tin oxide for the treatment of Boils, Stye and Acne.

HYPOTENSYL
The active principles of Viscum (GUI) with Gland Extracts for the treatment of conditions associated with HIGH BLOOD PRESSURE.

IODOBESIN
Iodalbumin and plurigland-ular total extracts for OBESITY.

RECENT CONFIRMATION
OF THE
APPLE POWDER TREATMENT OF DIARRHEA



"a particularly valuable therapeutic agent"
Vollmer, H.: Med. World, July, 1938

"supplanting the older, more conventional methods of treating diarrhea"
Spradlin, M. C.: Ky. Med. Jour., May, 1938

"addition of apple to milk accomplishes two purposes—the pH is lowered and a soft curd is produced"
Reithel, F. J., and Manville, I. A.: Am. J. Dis. Child., August, 1938

"good results from this therapy"
Manville, I. A.: Am. J. Dis. Child., January, 1939

APPELLA
Apple Powder (Stearns)

is supplied in 7-oz. cans for prescription use and in 1-lb. 4-oz. cans for hospital use.

Literature and Clinical Sample to Physicians on Request

FREDERICK STEARNS & COMPANY of CANADA, LIMITED
WINDSOR ONTARIO
Makers of Kasagra

Detroit, Mich. New York, N.Y. Kansas City, Mo. San Francisco, Calif. Sydney, Australia

For Mothers and Mothers to Be!

Ovaltine is a food supplement concentrating the nutritive values of milk, eggs and a special barley malt extract, lightly flavoured with cocoa. It helps expectant mothers maintain their vitality and so aids in bringing better babies into the world.

Ovaltine has these outstanding advantages as a tonic food beverage used during the period of pregnancy and lactation.

1.—It is a delicious tonic food beverage.
2.—It contributes essential vitamins and minerals.
3.—It adds extra nourishment.

Ovaltine Contains these Essentials.
Proteins, Carbohydrates
Calcium, Phosphorus
Iron and Vitamins A, B, D and G.

Your patients will find the flavour of Ovaltine appetizing and delightful.

OVALTINE
TONIC » FOOD » BEVERAGE
MANUFACTURED BY A. WANDER LTD.
PETERBOROUGH, CANADA
Also factories in Switzerland, England, France and United States.

Each fluid ounce of Dilaxol *E.B.S.* contains:

Bismuth Subsalicylate	*4 grains*
Digestive Enzymes	*1 grain*
Magnesium Trisilicate, Carbonate and Hydroxide	*75 grains*

Dilaxol is alkaline in reaction and, in contrast to the strong alkalies, does not stimulate the secretion of surplus acid; yet it will neutralize many times its volume of excess acid in the stomach. This unique property of Dilaxol is akin to the buffer action of the blood. Dilaxol neutralizes free acid and does not interfere with the natural digestive process, nor does it cause alkalosis.

Indicated in Dyspepsia, Duodenitis, Flatulence, Hyperacidity, Vomiting of Pregnancy and other gastro-intestinal disorders.

Palatable and Protective.

Also supplied in powder form. Sample on request.

THE E. B. SHUTTLEWORTH CHEMICAL CO. LIMITED

TORONTO MANUFACTURING CHEMISTS CANADA

STOCKS CARRIED AT

WINNIPEG, MAN.—CAMPBELL HYMAN LTD. VANCOUVER, B. C.—J. P. SOUTHCOTT & CO. LTD.

SPECIFY *E.B.S.* ON YOUR PRESCRIPTIONS

℞

DAGENAN

(M and B 693)

In the Treatment of

PNEUMOCOCCAL INFECTIONS

BRATHWAITES LTD.

Phone 21 085

PORTAGE at VAUGHAN

WINNIPEG

THE MANITOBA MEDICAL ASSOCIATION REVIEW

Vol. XIX., No. 6, June, 1939.

CONTENTS

Clinical Section.

Pollen Disease—Report of 111 Cases—by Charles H. A. Walton, M.Sc., M.D. (Man.), Lecturer in Medicine, University of Manitoba, Assistant Physician, Winnipeg General Hospital. 109.

Special Articles and Association Notes.

The Resuscitation of the Apparently Drowned. 117.

Minutes of Executive Meeting, May 2nd, 1939. 118.

Department of Health and Public Welfare.

The Preventive Aspects of Venereal Diseases. 123.

Communicable Diseases Reported. 123.

Mortality Statistics. 124.

Medical Library.

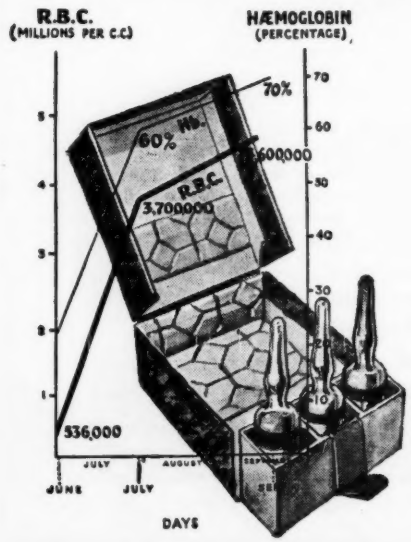
Current Literature. 127.

Obituary.

Dr. Henry Herbert Elliott. 128.

ANAHÆMIN B.D.H.

IN THE TREATMENT OF PERNICIOUS ANÆMIA



The administration of Anahæmin B.D.H. in pernicious anæmia has become a routine as a result of the uniformly satisfactory results produced.

Such results are exemplified in a report in which it is stated that weekly injections of 2 c.c. of Anahæmin B.D.H. for one month produced an increase in red blood corpuscles from 536,000 to 3,700,000 and a rise in hæmoglobin from 25 per cent. to 60 per cent. At the end of a further six weeks' treatment it was found that the red blood count had risen to 4,600,000, and the hæmoglobin to 70 per cent.

This increase in red blood cells from 536,000 to 4,600,000 was produced by a total dosage of 24 c.c. of Anahæmin.

Stocks of Anahæmin B.D.H. are held by leading druggists throughout the Dominion, and full particulars are obtainable from:

THE BRITISH DRUG HOUSES (CANADA) LTD.

Terminal Warehouse Toronto 2, Ont.

An/Can/396

Clinical Section

Pollen Disease*

REPORT OF 111 CASES

By

CHARLES H. A. WALTON, M.Sc., M.D. (Man.)

Lecturer in Medicine, University of Manitoba
Assistant Physician, Winnipeg General Hospital

It is estimated that at least one in every fifty persons on this continent has Hay Fever, and many of these later develop Asthma. Medicine has battled with the serious and fatal diseases with much patience and courage and often with great success. Hay Fever, being non fatal and funny like seasickness has not been of much concern to anyone except the sufferers and the patent medicine man. It is only in the last quarter of a century that it has entered the realm of practical therapeutics and even today it is apt to receive scant attention in many quarters. It is a curious fact that most of the pioneers in this field have been Hay Fever sufferers and thus were literally driven to the investigation of the disease.

History

Asthma has been recognized and well described by many since ancient times but although there is little doubt that Hay Fever also existed throughout history it was not described or recognized as a definite entity until it was first described by Bostock in 1819. Bostock, a prominent English physician, was associated with Bright in his work on Nephritis and as might be expected his descriptions were excellent and could hardly be improved upon today. Further, because he was widely respected, his ideas on the subject were accepted without question and as he did no practical investigation on the problem his pronouncements were accepted though wrong and probably retarded development of knowledge in the field. He ridiculed, without investigation, the popular notion that it was due to the "effluvium of new hay" and blamed it chiefly on sunlight because of course he was always better off in-doors. However, he deserves credit for his splendid description and recognition of the syndrome and at least in descriptive matter he was a worthy associate of Bright.

Forty years later (1859) Blackley, another English physician and also a sufferer, started his classical investigations which lasted 21 years. He proved beyond all question that his own symptoms (he was his own and only guinea pig) were due to certain species of grass pollen borne to his respiratory tract by the wind. He learnt, by chance, that the pollen which caused his symptoms when rubbed into a scratch on his arm raised an urticarial wheal but that other pollen did not do this. That is, he discovered the scratch test and also showed that the disease was constitutional and not confined to the upper respiratory tract. He even experimented with weak solutions injected into the skin and thus originated the intradermal test. He also studied the pollen content of the air and published the first pollen graph (1866).

It is interesting to note too that he attempted to study the height to which pollen might reach in the air by means of ingenious slides attached to balloons and thus anticipated by almost half a century similar studies from aeroplanes. I was interested to find in the rotogravure section of a Chicago paper recently the pictures of pollen studies carried out by Dr. O. C. Durham of the Abbott Laboratories through the agency of the modern aeroplane—two generations later.

When Blackley died in 1900 he had done a colossal amount of original work to which very little has been added since, but apart from experimenting with and condemning current medicinal aids, he died without offering any method of effective treatment other than the cryptic advice to take a long sea voyage or go to the mountains during the height of one's season. About this time Dr. Oliver Wendell Holmes told the Reverend Henry Ward Beecher—a Hay Fever sufferer too —that the only satisfactory remedy was gravel—eight feet deep.

It is a curious fact that Blackley's important work went practically unnoticed for very many years and it has been supposed that Pasteur's work on the bacterial origin of disease with its challenge and promise served to deflect medical interest from what seemed an unimportant disease. Some even tried to demonstrate a bacterial explanation of Hay Fever and the great physicist von Helmholtz actually published results of a study of hay fever secretions in which he thought he had demonstrated vibrios—thus a great man by stepping out of his own field managed to throw a further obstacle in the path of progress.

In 1902, Dunbar, working in Germany, tried to give a hypodermic dose of pollen extract to one of his pupils, Prausnitz, but the results were so terrifying that he permanently abandoned the idea and it lay dormant for another ten years. Following the current vogue for anti-toxins he tried to make a pollen anti-toxin with horse serum and thinking that he was getting satisfactory results marketed the serum under the name of "Pollantin." This in turn was widely accepted for a short time only to be found worthless and finally condemned.

Nature of Pollen Disease

In 1910-1911 Dr. Noon in England, Dr. Koessler in Chicago, and Dr. Lowdermilk of Kansas in-

* Presented at a meeting of the Winnipeg Medical Society on January 20th, 1939.

dependently showed Hay Fever could be satisfactorily prevented by the pre-seasonal administration of carefully measured minute doses of aqueous pollen extract and gradually increasing them as the patient's tolerance increased. Since then the method has been widely accepted and proven beyond reasonable doubt. But to this day little knowledge has been gained of the mechanism of pollen sensitivity unless Code's recent work on blood Histamine will throw some light on the problem.

Histamine explanation—Lewis & Dale about 1927 advanced the theory — based on experimental observations—that the reaction of the allergen on the reagin of the "shock tissues" of the body produced Histamine or a Histamine-like substance. In 1937 Haworth & MacDonald showed that workers in a cotton factory who were suffering from "stripper's asthma", had a blood histamine about double that found in normal people. Later in the same year Code & MacDonald demonstrated that the blood Histamine was present only in the granular series of white cells and probably all in the eosinophils — the often noted fact that eosinophilia occurs in allergic disease—at least in its active phases—may be noteworthy. Further Code has modified and greatly improved the methods of blood histamine analysis and has shown quite definitely that the histamine-like substance of blood can be crystallized out as pure histamine. Thus one may hope that these various contributions to our knowledge will help to elucidate the allergic problem and possibly produce new methods of attack. (Histamine has been used therapeutically in scattered instances for several years particularly in urticaria with some apparent success).

The only other advance of importance since 1910-1914 has been the discovery of the Prausnitz-Kustner reaction. If the blood serum of an allergic person is injected intradermally into a non-allergic person, the area of skin so treated becomes sensitive to the same allergen as that affecting the patient and remains so for some days and finally disappears. This is known as passive transfer of sensitivity. This reaction of course adds further proof of the constitutional nature of pollen and other allergic disease and it is also of some occasional practical use in diagnosis.

Seasonal Hay Fever and its relative seasonal asthma have been conclusively shown to be constitutional diseases due chiefly to pollen reaching the patient through the air and occasionally to such other air borne allergens as fungous spores, parts of insect, etc. The offending pollen must of course reach the patient's respiratory tract to cause trouble, and the only way in which it can constantly do so is by means of the respired air. That is, the only pollen that is really important to these patients is wind-borne pollen, or as the botanists call it, anemophilous pollen.

Van Leeuwenhoek in his wide microscopic studies first described pollen grains, and it is interesting to note that the best botanical pollen studies originated in the 17th and 18th centuries, long before its association with human ailments was suspected. Pollen grains are microscopic bodies varying upwards from about 20 mu (3x rbc) and are characteristic in appearance; the genus and frequently the species can be identified under the microscope. The pollen grain is the male fertilizing unit of plants and it must reach the pistil or female receptive unit for fertilization to occur.

In general, pollenation occurs in one of three main ways. The stamen, producing the pollen, may exist on the same plant as the pistil and pollenation is largely a matter of contiguity; in the brightly flowering plants it is moderately heavy and sticky and is carried mostly by insects, and finally there is the large group of plants (anemophilous by name) which produce large amounts of very light small pollen grains which are carried by the wind—often great distances—to the pistils of others. Obviously then the only pollen that is likely to reach the patient is that carried by the wind. Thus, the rose, goldenrod, daisy and dandelion with their bright flowers long accused of causing Hay Fever are really and necessarily innocent. It is astonishing how difficult it is to get patients and sometimes doctors to realize that these bright and conspicuous flowers are not responsible for their trouble. They do not see or recognize the inconspicuous grass or weed flower producing its clouds of poisonous pollen. Pollen grains have been shown to be capable of travelling many hundreds of miles and to reach a height of at least 10,000 feet in the air. Thus the much publicized local weed clearing projects designed as a public health measure are not likely to help much. Besides one would hardly recommend an attempt to eradicate all grasses and trees because their pollen causes Hay Fever.

Pollen Disease in Manitoba and the Prairies

The problem of pollen disease in any particular region is largely one of learning what pollens occur there, when they occur and in what amounts. In many large areas on this continent extensive pollen surveys have been carried out and the management of pollen cases in such areas is thus made very accurate and is much simplified. No complete study has ever been made in Manitoba or the prairie provinces as far as I am aware other than a ragweed count in Winnipeg by Durham and occasional brief botanical surveys by commercial drug houses. We have been obliged to base local practice on experience elsewhere (e.g., Minnesota) with some fragmentary knowledge of the local flora producing wind borne pollen. A pollen study was commenced here in 1938 with assistance from the Banting Research Foundation. We hope in about a year to be able to present some accurate data on local pollen conditions. Some of the wild statements in commercial literature may then be properly assessed.

I am unable to advance any theories as to the prevalence of pollen disease in Manitoba but think that it is not likely to be much different from the north central states of the U.S.A. However, I hope in presenting a report of my experience in 111 cases to throw some light on the problem.

Although pollen undoubtedly causes most seasonal allergic manifestations we also know that other particles carried in the air such as fungous spores, rust spores, insect debris, etc., also do so in some cases. (Dr. F. T. Cadham in 1924 reported the first three rust spore asthma cases on record). However, all patients that I have examined with seasonal manifestations I have labelled as "pollen disease" fully realizing that some may not be. Accordingly I have skin tested all of them with all the pollens I had reason to suspect and in addition I have also tested them to a list of miscellaneous inhalants which, of course, are not necessarily seasonal but may be accessory factors and which would have to be dealt with to give satisfactory results.

TABLE I.

1. Box Elder (Man. Maple)
2. Common Hazel
3. Canoe Birch
4. Poplar
5. Pussy Willow
6. Cottonwood
7. American Elm
8. Stinging Nettle
9. Pennsylvania Sedge
10. Long-beaked Sge.
11. Great Bulrush
12. Cat Tail
13. Green Ash
14. Black Ash
15. Bur Oak
16. Sweet Vernal Gr.
17. Timothy
18. Red Top
19. June Grass
20. Canada Blue Gr.
21. Annual Blue Gr.
22. Rye (cult.)
23. Quack Grass
24. Ryegrass
25. Corn
26. Barnyard Grass
27. Sorghum
28. Brome
29. Rib Grass
30. Common Plantain
31. Sheep Sorrel
32. Curled Dock
33. Alfalfa
34. Sweet Clover
35. Common Pigweed
36. Tumbleweed
37. Russian Thistle
38. Lamb's Quarters
39. Goosefoot
40. Burning Bush
41. Saltweed
42. Prairie Sage
43. Pasture Sage
44. Common Mugwort
45. Dragon Sage
46. Western Ragweed
47. Giant Ragweed
48. Common Ragweed
49. Marsh Elder
50. Cocklebur
51. Dandelion

TABLE I. shows the pollens which were used in routine testing.

TABLE II. — *Miscellaneous Inhalants*

1. Cat Hair
2. Cattle Hair
3. Dog Hair
4. Horse Hair
5. Sheep's Wool
6. Camel Hair
7. Goat Hair
8. Hog Hair
9. Rabbit Hair
10. Chicken Feathers
11. Duck Feathers
12. Goose Feathers
13. Turkey Feathers
14. Orris Root
15. Henna
16. Tragacanth
17. Cotton Seed
18. Kapok
19. Linseed
20. Silk
21. Rayon
22. Cotton Linters
23. House Dust (stock)
24. Alternaria
25. Aspergillus gl.
26. Aspergillus fum.
27. Aspergillus niger.
28. Penicillium exp.
29. Rhizopus nigricans
30. Staphylococcus Albus
31. Staphylococcus aureus
32. Streptococcus hem.
33. Micrococcus catarrh
34. Pneumococcus
35. Yeast
36. Fish Glue
37. Pyrethrum
38. Lycopodium
39. Tobacco
40. Canary Feathers
41. Parrot Feathers
42. Pheasant Feathers
43. Pigeon Feathers
44. Fox Hair
45. Mink
46. Muskrat
47. Racoon
48. Skunk
49. Squirrel

TABLE II. shows the miscellaneous inhalants used in routine testing.

Pollen Chart — Reactions

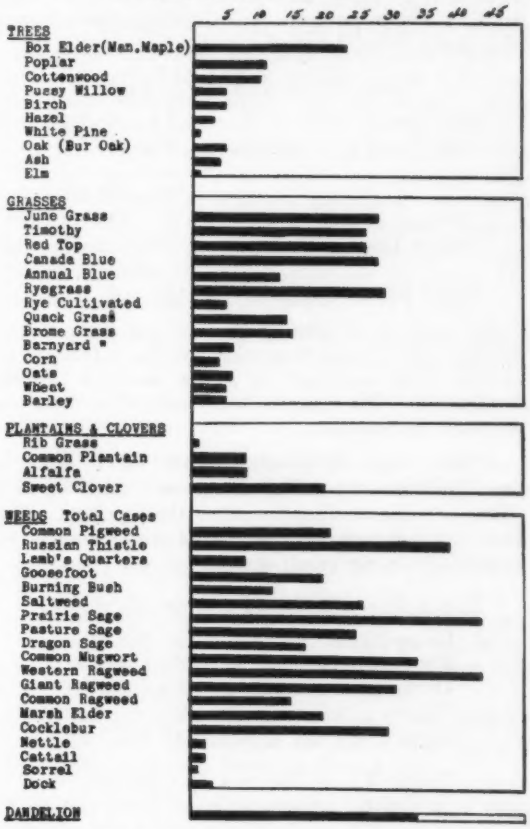


Chart showing number of reactions for each pollen.

The chart shows graphically the number of positive skin tests obtained with each pollen tested but it does not follow that they are all equally important or that the list includes all the possible offending pollens.

TABLE III. — *Non-Pollen Factors*

Allergen	No. of times a factor	Allergen	No. of times a factor
Rust Spores		Orris Root	7
Crown rust of oats	1	Pyrethrum	6
Leaf rust of wheat	1	Glue	2
Stem rust of wheat	1	Tobacco	2
Hairs and Dander		Textiles	2
Rabbit Hair	1	**Foods**	
Horse	7	Barley	2
Dog	6	Rice	2
Cat	8	Wheat	3
Feathers		Egg	2
Goose	5	Pork	1
Duck	4	Chocolate	1
Chicken	4		
Canary	2		

My experience is that Hay Fever patients are exceedingly grateful for any relief they can get but this is not the only reason for attempting to solve their problem. My next table shows that many of these patients have asthma and as this often becomes perennial and then much more refractory to treatment the treatment of Hay Fever may justly be looked upon as a most important prophylactic measure for asthma. It is estimated by many authorities that about 50% of all Hay Fever patients will develop some degree of asthma if not treated.

TABLE IV. — *Analysis of Cases*

Hay Fever (only)	54	(48.7%)
Hay Fever and Asthma	43	(38.7%)
	97	(87.4%)
Asthma (only)	11	(10.4%)
Pollen Dermatitis	3	(2.6%)
Total Pollen Cases	111	

My method of testing was to use the scratch method and if these were negative the intradermal method was used and in a few cases it proved invaluable. The patch test was also used in seasonal dermatitis.

Pollen cases frequently have other allergic manifestations than Hay Fever and Asthma, and these are due to factors other than pollen. The next table shows an analysis of these associated conditions in my small series.

TABLE V. — *Associated Allergic Conditions*

Urticaria	21	(18.9%)
Eczema	8	(7.2%)
Dermatitis	7	(6.3%)
Others	2	
None	73	(65.7%)

TABLE VI. — *Age and Sex Incidence*

Sex Incidence

Females	57
Males	54
	111

Age Incidence

at Consultation		Years	at Onset
0		0-4	5
9	9	5-9	20
10		10-14	11
13	23	15-19	18
	29	20-29	30
	27	30-39	18
	13	40-49	7
	10	50 & over	2
	111		111

Sex is usually evenly distributed in published series and also in mine. Age is important. The disease may develop at any age but seems to be more troublesome in the very young. Furthermore, the stronger the hereditary history the more likely that trouble will develop early in life. A curious observation is that boys often seem to improve after puberty and girls seem to get worse.

It has been repeatedly shown that the allergic diathesis is hereditary and there is strong evidence that it is transmitted as a dominant Mendelian character. It is only the allergic tendency that is inherited and the offspring do not necessarily exhibit the same form of allergic disease as the parents. The eliciting of a positive family history is very valuable in making a diagnosis and if it is absent, particularly in the young, one should reconsider the diagnosis. It has also been repeatedly shown that when heredity is bilateral the children are apt to show symptoms in the first decade of life, and on the other hand, patients with no detectable family history usually have their onset of symptoms well on in adult life.

TABLE VII. — *Heredity*

Bilateral	23	(20.9%)	
Unilateral	49	(43.6%)	64.5%
None elicited	39	(35.5%)	
Total	111		

1,440 *normal* people only 6.4% had an allergic heredity.
3,139 *allergic* patients showed an heredity factor in 49.4%.
588 *allergic* children showed an allergic heredity factor in 58.1%.

"Tuft"

The seasons have been variously described—for example Spring, Summer and Fall, etc., but because of the small size of my group and their indefinite groupings I have classified them more simply.

TABLE VIII. — *Seasons*

Early Summer	49
Late Summer	50
Whole Summer	12
	111

No. with some perennial symptoms 20.
Duration of symptoms varied from one to twenty-eight seasons.

Note: Tendency to become perennial—common experience elsewhere.

Treatment and Results

All these considerations may be of great academic interest and of some practical interest but the thing that you will naturally be most interested in is the result of treatment. Tuft says that the uncomplicated pollen cases of Asthma and Hay Fever should have practically complete relief of symptoms — when adequately treated — in at least 85% of cases; that failure in ten of the

remaining 15% is probably due to inadequate etiological diagnosis and that 5% will probably prove refractory to either diagnostic procedures or treatment. The treatment of pollen or summer dematitis is, of course, not nearly as satisfactory. Ellis of Minnesota thinks that one should obtain good results in at least 95% of cases—and says they do in Minnesota. In this connection I might remark that Minnesota's study of pollen is one of the most complete on the continent.

In all those in whom a diagnosis of pollen sensitivity was made I advised desensitization. The method used was that usually employed. Small doses of exceedingly dilute pollen extract were administered hypodermically and gradually increased using less dilute solutions until the patient was getting half a cubic centimeter of the most concentrated solution (i.e., an approx. 1% soln.). When this dose was reached it was continued at intervals of about one week to the end of the season and if the patient followed my advice to continue treatment throughout the year this dose was given at intervals of three to four weeks until the following season when the interval was reduced to once weekly. As most patients were sensitive to a variety of pollens I used mixed extracts prepared in accordance with their tests and with my experience in their relative importance. It was found in most cases of those who discontinued treatment at the end of their season that when it was started again next Spring they were required to go back to the most dilute solution and be built up through successive and increasing doses as in the previous year—although they usually did not react quite so briskly as before. The advantage of perennial treatment was that an occasional injection kept the patient's protection high and did not require numerous injections before the next season. Further the best results occurred in the perennially treated cases. Seasonal treatment was most difficult due to the fact that the patient was getting pollen in the air as well as hypodermically and, therefore, doses have to be increased very carefully and the patient carefully watched for severe reactions. Even with this trouble the patients are usually grateful for the relief they get.

TABLE IX. — *Results*

A. *Treatment by Pollen Desensitization.*

1. Reported Cases:		
51% Complete relief reported (9 had asthma)	30	cases
33% Good relief with minor symptoms (9 had asthma)	19	"
12% Slight to moderate relief (4 had asthma)	7	"
Summer Dermatitis with only moderate relief	2	"
Total treated and reported cases	58	"
Insufficient treatment to date	15	"
2. No reports	8	
	81	

In this series of 111 cases only 81 were treated by pollen desensitization. Of these I was unable to obtain reports from 8, and 15 had started treatment so recently that results could not be evaluated. Of fifty-eight adequately treated and reported cases two were cases of pollen dermatitis in which the results were not particularly satisfactory although both patients feel that they have been benefited and I think would do better if they were able to leave their farms—at least temporarily. This leaves a total of 56 adequately treated and reported cases. Of these 30 or 51% reported complete relief and it is gratifying to note that 9 of these were asthmatics. Nineteen cases or 33% reported good relief with only minor symptoms at intervals throughout their season and 9 of these were asthmatics. There were seven cases or 12%, of whom 4 were asthmatics, reporting very slight or poor relief. I think that these results compare quite favourably with those mentioned above and as knowledge of local conditions improves one might anticipate better results.

Of the 30 cases reporting complete relief all had had an adequate course of pre-seasonal treatment.

Of the 19 cases reporting good relief with only minor symptoms:

- 8 had pre-seasonal treatment.
- 2 had pre-seasonal treatment starting very late.
- 5 had seasonal treatment only.
- 2 were complicated by orris root sensitivity. (i.e. cosmetics)
- 1 asthmatic gave negative scratch tests and was only diagnosed by means of the intradermal technique and started treatment late but still with quite good results.
- 1 had good hay fever relief but less asthma relief. I expect that further and prolonged treatment will improve this patient.

Of the seven cases reporting moderate to poor results:

- 5 had adequate pre-seasonal treatment.
- 1 started treatment in middle of season.
- 1 was complicated by a summer dermatitis.

I think that these results indicate the desirability of pre-seasonal treatment. However, seasonal treatment, when necessary, offers a good deal of help.

TABLE X. — *Results*

B. *Not desensitized.*

Partially improved on Nitrohydrochloric Acid	1	case
Improved on removing cat	1	"
Improved by travel; one to North and one to B.C.	2	cases
Not tested	4	"
Undiagnosed (negative tests)	10	"
Diagnosed but not treated	12	"
	30	

Kellogg's

ALL-BRAN

helps elimination

and improves

intestinal tone

because it

provides "bulk"

and Vitamin

B1

Made by Kellogg's
in London, Canada

This table indicates briefly what happened to the remaining 30 untreated cases. In ten of these I was unable to make a diagnosis (i.e. 11%). It seems to me that this is too high a proportion of failures and I think it indicates the necessity of further study of the problem of air borne pollen and other allergens in this area. The rest of the table is self explanatory. The result obtained by one patient who obtained considerable relief by disposing of her cat is interesting because she was also pollen sensitive but did not have cat symptoms out of the pollen season. Apparently she suffered from a summation of the two causes and the removal of one therefore helped. However, another season may give her trouble and desensitization may still be required.

Summary

1. A short history of pollen disease and its importance has been presented.
2. The necessity of making further pollen studies has been noted and such study is now under way. We hope that this work will not only increase accuracy in diagnosis but improve treatment. Another likely result should be that testing will be simplified and therefore the method can be applied more economically and widely.
3. 111 pollen cases are summarized and results of treatment in 58 reported cases are analyzed.
4. The importance of Hay Fever is emphasized particularly in regard to its relation to asthma.
5. Modern methods of treatment when based on a correct etiological diagnosis give very satisfactory seasonal results but unfortunately treatment must be continued for many seasons and clinical cures are not common unless treatment is given for several years.

In conclusion I would like to express my appreciation of the assistance and kindly encouragement given me by Dr. Daniel Nicholson and to acknowledge the excellent co-operation given by Dr. Margaret G. Dudley who has been of great assistance in the botanical part of the work.

NOTICE

Practice available Hyas, Saskatchewan. For information write to Mr. P. Kukura, Secretary, Hyas and District Board of Trade, Hyas, Sask.

DOCTOR WANTED

Porcupine Plain, Sask., for information write to Mrs. Eva McKee, Porcupine Plain, Sask.

TAKING NOTHING FOR GRANTED

EVERY Carnation evaporating plant has a fully equipped laboratory for testing the quality of Carnation Milk at every step. But the photograph above shows the *central* laboratory, which receives samples daily from all plants—for a final control-check, to make sure that the same high standard is maintained everywhere. . . . That is one of the reasons why pediatricians can always depend on the uniform purity and goodness of this accepted milk, no matter when or where it is purchased.

A BOOKLET FOR PHYSICIANS —*Write for "Simplified Infant Feeding," an authoritative publication treating of the use of Irradiated Carnation Milk in normal and difficult feeding cases . . . Carnation Company Ltd., Toronto, Ontario.*

IRRADIATED
Carnation Milk
A CANADIAN PRODUCT — *"from contented cows"*

AMNIOTIN

(Squibb Estrogenic Substance)

SPECIAL PACKAGES AVAILABLE FOR USE IN

Control of Atrophic Rhinitis

AMNIOTIN has a regenerative effect on the type of nasal mucosa seen in atrophic rhinitis . . . an effect that has been found useful in the treatment of this condition.

Amniotin in Oil for Intranasal Administration by the physician is provided in 5-cc. screw-cap vials containing 10,000 International Units per 1-cc. . . . may be applied to nasal mucosa on cotton pledgets or by means of an atomizer. The insert accompanying this package outlines procedure for treatment.

Amniotin in Oil with Nasal Atomizer—an atomizer package for home use under the direction of the physician. It contains a total of 20,000 International Units of Amniotin in 30 cc. of specially purified corn oil. It provides for continuous treatment during the intervals between periodic visits to the physician's office or to the clinic. No printed matter accompanies this package.

Amniotin in Oil for Intranasal use is also supplied without atomizer in 30-cc. bottles (total potency 20,000 International Units).

For literature write 36 Caledonia Rd., Toronto.

E·R·SQUIBB & SONS OF CANADA, Ltd.

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858